

### **Abstract**

The invention relates to a method of enriching a pressurised gas stream (1) with one of the components (A) thereof. The inventive method comprises the following steps: the stream is separated into at least first and second fractions (2, 3); at least one part of the first fraction (2) is sent to a separation unit (ASU); the separation unit supplies at least two discharges, including a first discharge (10) having a greater A content than that of the fraction (2) supplied to the separation unit; at least one part of the first discharge (10) is mixed with at least one part of the second fraction (3) such as to form a pressurised gas mixture (15); the second fraction (3) is expanded and, subsequently, at least one part of the first discharge (10) is mixed therein.